

# PATENT COOPERATION TREATY

From the  
INTERNATIONAL SEARCHING AUTHORITY

# PCT

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY  
(PCT Rule 43bis.1)

To:

see form PCT/ISA/220

Date of mailing  
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference  
see form PCT/ISA/220

**FOR FURTHER ACTION**  
See paragraph 2 below

International application: No.  
PCT/GB2004/002848

International filing date (day/month/year)  
02.07.2004

Priority date (day/month/year)  
04.07.2003

International Patent Classification (IPC) or both national classification and IPC  
B05B1/00

Applicant  
INCRO LIMITED

**1. This opinion contains indications relating to the following items:**

- ☒ Box No. I Basis of the opinion
- ☒ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

**2. FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

**3. For further details, see notes to Form PCT/ISA/220.**

Name and mailing address of the ISA:



European Patent Office  
D-80298 Munich  
Tel. +49 89 2399 - 0 Tx: 523656 epmu d  
Fax: +49 89 2399 - 4465

Authorized Officer

Eberwein, M

Telephone No. +49 89 2399-7260



**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.  
PCT/GB2004/002848

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**Box No. I Basis of the opinion**

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1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.  
☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
  - a. type of material:  
☐ a sequence listing  
☐ table(s) related to the sequence listing
  - b. format of material:  
☐ in written format  
☐ in computer readable form
  - c. time of filing/furnishing:  
☐ contained in the international application as filed.  
☐ filed together with the international application in computer readable form.  
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.  
PCT/GB2004/002848

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**Box No. II Priority**

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1. ☒ The following document has not been furnished:

☒ copy of the earlier application whose priority has been claimed (Rule 43*bis*.1 and 66.7(a)).

☐ translation of the earlier application whose priority has been claimed (Rule 43*bis*.1 and 66.7(b)).

Consequently it has not been possible to consider the validity of the priority claim. This opinion has nevertheless been established on the assumption that the relevant date is the claimed priority date.

2. ☐ This opinion has been established as if no priority had been claimed due to the fact that the priority claim has been found invalid (Rules 43*bis*.1 and 64.1). Thus for the purposes of this opinion, the international filing date indicated above is considered to be the relevant date.

3. Additional observations, if necessary:

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**Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

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1. Statement

Novelty (N)	Yes: Claims	3-8,11-30
	No: Claims	1,2,9,10
Inventive step (IS)	Yes: Claims	3-8,11-30
	No: Claims	1,2,9,10
Industrial applicability (IA)	Yes: Claims	1-30
	No: Claims	

2. Citations and explanations

**see separate sheet**

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING  
AUTHORITY (SEPARATE SHEET)**

International application No.

PCT/GB2004/002848

**Re Item V.**

1. The following documents are referred to in this communication:

D1 : US 5 911 851

D2 : US 2001/019086

2. INDEPENDENT CLAIM 1

The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 1 is not new in the sense of Article 33(2) PCT.

Documents (D1) and (D2) disclosing (the references in parenthesis applying to document (D1)):

A nozzle arrangement adapted to be fitted to an outlet of a fluid supply and generate a spray of fluid dispensed from said fluid supply during use, said nozzle arrangement having a body which comprises:

- (1) actuator means which is adapted, upon operation, to cause fluid to flow from said fluid supply and through said nozzle arrangements (not shown but implicit);
- (2) an inlet (81) through which fluid from said fluid supply accesses the nozzle arrangement during use;
- (3) one or more outlet orifices (62) through which fluid is ejected from the nozzle arrangement during use; and
- (4) an internal fluid flow passageway which connects said inlet to said one or more outlet orifices;

wherein said fluid flow passageway further comprises an internal chamber (65), said chamber having two or more inlet orifices (63), and an outlet orifice through which fluid may exit the chamber wherein each inlet channel and orifice is larger than 0.1 mm diameter.

The wording "...has a big enough diameter to ensure that it will not become partially or totally blocked." does not meet the requirements of Article 6 PCT in that the matter for which protection is sought is not clearly defined. The wording attempts to define the subject-matter in terms of the result to be achieved, which merely amounts to a statement of the underlying problem, without providing the technical features necessary for achieving this result.

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING  
AUTHORITY (SEPARATE SHEET)**

International application No.

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**3. CLAIMS 2, 9 and 10**

Dependent claims 2, 9 and 10 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of novelty and/or inventive step.

**Further remarks**

9. The features of the claims are not provided with reference signs placed in parentheses (Rule 6.2(b) PCT).
10. The independent claim is not in the two-part form in accordance with Rule 6.3(b) PCT, which in the present case would be appropriate, with those features known in combination from the prior art being placed in the preamble (Rule 6.3(b)(I) PCT) and with the remaining features being included in the characterising part (Rule 6.3(b)(ii) PCT).

7 Dec 2004  
PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

**PCT**

NOTIFICATION OF TRANSMITTAL OF  
THE INTERNATIONAL SEARCH REPORT AND  
THE WRITTEN OPINION OF THE INTERNATIONAL  
SEARCHING AUTHORITY, OR THE DECLARATION

To:  
WILSON GUNN SKERRETT  
Attn. Badger, John R.  
Charles Street  
148/9 Great Charles Street  
Birmingham B3 3HT  
UNITED KINGDOM

(PCT Rule 44.1)

Applicant's or agent's file reference <b>IM/P/76348.WO/B C</b>	Date of mailing (day/month/year) <b>07/10/2004</b>
International application No. <b>PCT/GB2004/002848</b>	International filing date (day/month/year) <b>02/07/2004</b>
Applicant <b>INCRO LIMITED</b>	

1. ☒ The applicant is hereby notified that the international search report and the written opinion of the International Searching Authority have been established and are transmitted herewith.

**Filing of amendments and statement under Article 19:**

The applicant is entitled, if he so wishes, to amend the claims of the international Application (see Rule 46):

**When?** The time limit for filing such amendments is normally 2 months from the date of transmittal of the International Search Report; however, for more details, see the notes on the accompanying sheet.

**Where?** Directly to the International Bureau of WIPO, 34 chemin des Colombettes  
1211 Geneva 20, Switzerland, Facsimile No.: (41-22) 740.14.35

**For more detailed instructions;** see the notes on the accompanying sheet.

2. ☐ The applicant is hereby notified that no international search report will be established and that the declaration under Article 17(2)(a) to that effect and the written opinion of the International Searching Authority are transmitted herewith.

3. ☐ **With regard to the protest** against payment of (an) additional fee(s) under Rule 40.2, the applicant is notified that:

- ☐ the protest together with the decision thereon has been transmitted to the International Bureau together with the applicant's request to forward the texts of both the protest and the decision thereon to the designated Offices.  
☐ no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

**4. Reminders**


Shortly after the expiration of **18 months** from the priority date, the international application will be published by the International Bureau. If the applicant wishes to avoid or postpone publication, a notice of withdrawal of the international application, or of the priority claim, must reach the International Bureau as provided in Rules 90bis.1 and 90bis.3, respectively, before the completion of the technical preparations for international publication.

The applicant may submit comments on an informal basis on the written opinion of the International Searching Authority to the International Bureau. The International Bureau will send a copy of such comments to all designated Offices unless an international preliminary examination report has been or is to be established. These comments would also be made available to the public but not before the expiration of 30 months from the priority date.

Within **19 months** from the priority date, but only in respect of some designated Offices, a demand for international preliminary examination must be filed if the applicant wishes to postpone the entry into the national phase until **30 months** from the priority date (in some Offices even later); otherwise, the applicant must, within **20 months** from the priority date, perform the prescribed acts for entry into the national phase before those designated Offices.

In respect of other designated Offices, the time limit of **30 months** (or later) will apply even if no demand is filed within 19 months.

See the Annex to Form PCT/IB/301 and, for details about the applicable time limits, Office by Office, see the *PCT Applicant's Guide*, Volume II, National Chapters and the WIPO Internet site.

Name and mailing address of the International Searching Authority  European Patent Office, P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Authorized officer <b>Martin Zibell</b>
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# PATENT COOPERATION TREATY

# PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference <b>IM/P/76348.WO/B C</b>	<b>FOR FURTHER ACTION</b> <small>see Form PCT/ISA/220 as well as, where applicable, Item 5 below.</small>	
International application No. <b>PCT/GB2004/002848</b>	International filing date (day/month/year) <b>02/07/2004</b>	(Earliest) Priority Date (day/month/year) <b>04/07/2003</b>
Applicant  <b>INCRO LIMITED</b>		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 4 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

**1. Basis of the report**

a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ **Certain claims were found unsearchable** (See Box II).

3. ☐ **Unity of invention is lacking** (see Box III).

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

☐ the text is approved as submitted by the applicant.

☒ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regards to the **drawings**,

a. the figure of the **drawings** to be published with the abstract is Figure No. 1

☐ as suggested by the applicant.

☒ as selected by this Authority, because the applicant failed to suggest a figure.

☐ as selected by this Authority, because this figure better characterizes the invention.

b. ☐ none of the figures is to be published with the abstract.

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/GB2004/002848

### Box No. IV Text of the abstract (Continuation of item 5 of the first sheet)

A nozzle arrangement includes a chamber (204) having a plurality of divergent inlet orifices (203) which are directed towards opposed walls (205) or sidewalls (206) of the chamber (204). The chamber (204) is further provided with a plurality of outlet orifices (102) which are not aligned with the inlet orifices (203) and in the preferred embodiment also constitute outlet orifices of the nozzle arrangement.



## INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB2004/002848

A. CLASSIFICATION OF SUBJECT MATTER  
IPC 7 B05B1/00

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 B05B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 911 851 A (LESSMOELLMANN CHRISTOPH ET AL) 15 June 1999 (1999-06-15) abstract; figures 13-17	1,2,9,10
X	US 2001/019086 A1 (KOEHLER ERIC ET AL) 6 September 2001 (2001-09-06) abstract; figure 2a	1,2,9,10
A	WO 97/31841 A (INCRO LTD ; LAIDLER KEVIN OSWALD (GB)) 4 September 1997 (1997-09-04) cited in the application the whole document	1
A	US 3 767 125 A (GEHRES E ET AL) 23 October 1973 (1973-10-23) abstract	1

☐ Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

## \* Special categories of cited documents:

\*A\* document defining the general state of the art which is not considered to be of particular relevance

\*E\* earlier document but published on or after the international filing date

\*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

\*O\* document referring to an oral disclosure, use, exhibition or other means

\*P\* document published prior to the international filing date but later than the priority date claimed

\*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

\*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

\*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

\*&amp;\* document member of the same patent family

Date of the actual completion of the international search

30 September 2004

Date of mailing of the international search report

07/10/2004

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax: (+31-70) 340-3016

Authorized officer

Eberwein, M

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/GB2004/002848

Patent document cited in search report		Publication date		Patent family member(s)	Publication date			
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			US	5547094 A	20-08-1996			
			US	6007676 A	28-12-1999			
			US	6503362 B1	07-01-2003			
			AT	183673 T	15-09-1999			
			AU	4829993 A	26-04-1994			
			CA	2145758 A1	14-04-1994			
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			CN	1342524 A ,B	03-04-2002			
			CN	1087843 A ,B	15-06-1994			
			DE	69326158 D1	30-09-1999			
			DE	69326158 T2	16-03-2000			
			DK	664733 T3	13-12-1999			
			EP	0664733 A1	02-08-1995			
			EP	0860210 A2	26-08-1998			
			ES	2135489 T3	01-11-1999			
			WO	9407607 A1	14-04-1994			
			GR	3031558 T3	31-01-2000			
			IL	107120 A	30-09-1997			
			JP	3425522 B2	14-07-2003			
			JP	11047641 A	23-02-1999			
			JP	8501979 T	05-03-1996			
			SG	45191 A1	16-01-1998			
			US	5472143 A	05-12-1995			
			US	2003075623 A1	24-04-2003			
			GB	2271301 A ,B	13-04-1994			
			HK	1001472 A1	19-06-1998			
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						AT	252948 T	15-11-2003
						AU	2030500 A	26-06-2000
						BR	9907798 A	17-10-2000
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CN	1289270 T	28-03-2001						
DE	69912398 D1	04-12-2003						
DE	69912398 T2	26-08-2004						
EP	1053059 A1	22-11-2000						
JP	2003526760 T	09-09-2003						
WO	0033965 A1	15-06-2000						
WO 9731841	A	04-09-1997	GB	2299529 A	09-10-1996			
			AT	198581 T	15-01-2001			
			AU	7222896 A	16-09-1997			
			DE	69611547 D1	15-02-2001			
			DE	69611547 T2	23-08-2001			
			DK	883557 T3	18-06-2001			
			EP	0883557 A1	16-12-1998			
			ES	2155206 T3	01-05-2001			
			WO	9731841 A1	04-09-1997			
			US	5743468 A	28-04-1998			
US 3767125	A	23-10-1973	NONE					